

## EAST Search History

| Ref # | Hits   | Search Query  | DBs                             | Default Operator | Plurals | Time Stamp       |
|-------|--------|---|---------------------------------|------------------|---------|------------------|
| S1    | 84     | ((overhead or over adj head or over-head) adj bridge adj2 crane)  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR               | ON      | 2006/03/08 14:36 |
| S3    | 100605 | ((variable adj frequency adj drive) or (motor adj drive))   | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR               | ON      | 2006/03/08 12:28 |
| S4    | 9      | S1 and S3   | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR               | ON      | 2006/03/08 12:24 |
| S6    | 1200   | (variable adj frequency adj drive)  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR               | ON      | 2006/03/08 12:29 |
| S7    | 837    | (variable adj frequency adj drive) and motor and (controller or microcontroller or micro-controller or micro adj controller or processor or microprocessor or micro-processor or micro adj processor or DSP or digital adj signal or processing adj unit or control adj unit)   | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR               | ON      | 2006/03/08 12:31 |
| S8    | 369    | (variable adj frequency adj drive) and motor and (controller or microcontroller or micro-controller or micro adj controller or processor or microprocessor or micro-processor or micro adj processor or DSP or digital adj signal or processing adj unit or control adj unit) and voltage and current and frequency                         | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR               | ON      | 2006/03/08 12:31 |
| S9    | 341    | (variable adj frequency adj drive) and motor and (controller or microcontroller or micro-controller or micro adj controller or processor or microprocessor or micro-processor or micro adj processor or DSP or digital adj signal or processing adj unit or control adj unit) and voltage and current and frequency and (speed or velocity) | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR               | ON      | 2006/03/08 12:31 |

## EAST Search History

|     |      |  |                                 |    |    |                  |
|-----|------|--|---------------------------------|----|----|------------------|
| S10 | 112  | (variable adj frequency adj drive) and motor and (controller or microcontroller or micro-controller or micro adj controller or processor or microprocessor or micro-processor or micro adj processor or DSP or digital adj signal or processing adj unit or control adj unit) and voltage and current and frequency and (speed or velocity) and (brak\$) | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/03/08 14:37 |
| S11 | 7    | ("5294066" or "5319292" or "5941305" or "6041856" or "6131557" or "6463812" or "6564548").pn.  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/03/08 14:16 |
| S12 | 9    | ("5319292").URPN.  | USPAT                           | OR | ON | 2006/03/08 14:22 |
| S13 | 800  | (bridge adj2 crane)  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/03/08 14:35 |
| S14 | 341  | (variable adj frequency adj drive) and motor and (controller or microcontroller or micro-controller or micro adj controller or processor or microprocessor or micro-processor or micro adj processor or DSP or digital adj signal or processing adj unit or control adj unit) and voltage and current and frequency and (speed or velocity)              | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/03/08 14:34 |
| S16 | 3505 | ((overhead or over adj head or over-head) adj2 crane)  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/03/08 14:36 |
| S17 | 796  | (variable adj frequency) and motor and (controller or microcontroller or micro-controller or micro adj controller or processor or microprocessor or micro-processor or micro adj processor or DSP or digital adj signal or processing adj unit or control adj unit) and voltage and current and frequency and (speed or velocity) and (brak\$)           | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/03/08 14:50 |
| S18 | 10   | S16 and S17  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/03/08 14:51 |

## EAST Search History

|     |     |  |                                 |    |    |                  |
|-----|-----|--|---------------------------------|----|----|------------------|
| S19 | 836 | ((variable or adjustable) adj frequency) and motor and (controller or microcontroller or micro-controller or micro adj controller or processor or microprocessor or micro-processor or micro adj processor or DSP or digital adj signal or processing adj unit or control adj unit) and voltage and current and frequency and (speed or velocity) and (brak\$) | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/03/08 14:51 |
| S20 | 11  | S16 and S19  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/03/08 15:15 |
| S31 | 2   | ("4965847" or "5077508").pn.   | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/03/08 15:55 |
| S32 | 1   | "5127533".pn.  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/03/13 12:01 |
| S33 | 1   | "6417644".pn.  | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/03/13 12:06 |
| S34 | 19  | velocity and (variable or adjustable) adj frequency and brak\$4 and (controller or microcontroller or micro-controller or micro adj controller or processor or microprocessor or micro-processor or micro adj processor or DSP or digital adj signal or processing adj unit or control adj unit) and crane   | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/03/13 12:08 |
| S35 | 405 | velocity and (variable or adjustable) adj frequency and brak\$4 and (controller or microcontroller or micro-controller or micro adj controller or processor or microprocessor or micro-processor or micro adj processor or DSP or digital adj signal or processing adj unit or control adj unit) and motor   | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/03/13 12:08 |
| S36 | 78  | velocity and ((variable or adjustable) adj frequency adj drive) and brak\$4 and (controller or microcontroller or micro-controller or micro adj controller or processor or microprocessor or micro-processor or micro adj processor or DSP or digital adj signal or processing adj unit or control adj unit) and motor   | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/03/13 12:08 |

## EAST Search History

|     |    |   |                                 |    |    |                  |
|-----|----|---|---------------------------------|----|----|------------------|
| S37 | 24 | velocity near4 control\$4 and ((variable or adjustable) adj frequency adj drive) and brak\$4 and (controller or microcontroller or micro-controller or micro adj controller or processor or microprocessor or micro-processor or micro adj processor or DSP or digital adj signal or processing adj unit or control adj unit) and motor | US-PGPUB;<br>USPAT;<br>EPO; JPO | OR | ON | 2006/03/13 12:09 |
|-----|----|---|---------------------------------|----|----|------------------|